Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Reliability and Continuity of Communications Networks, Including Broadband Technologies	))	PS Docket No. 11-60

COMMENTS OF NCTA – THE INTERNET & TELEVISION ASSOCIATION

NCTA – The Internet & Television Association (NCTA) submits these comments in response to the *Backhaul Notice* issued by the Public Safety and Homeland Security Bureau in the above-referenced proceeding.[1] As NCTA explained in its July 2018 comments, it would be unnecessary and counterproductive to expand the voluntary Wireless Resiliency Cooperative Framework (Framework) to include backhaul providers or to establish a separate resiliency framework solely for backhaul providers.[2]

I. CABLE OPERATORS DEVOTE SIGNIFICANT EFFORTS TO MAINTAINING THE RESILIENCY OF THEIR NETWORKS, INCLUDING FACILITIES USED FOR BACKHAUL

The *Backhaul Notice* asks a variety of questions regarding existing practices of backhaul providers to ensure network resiliency and continuity of service before, during, and after natural disasters.[3] Cable operators approach these issues both as retail providers of communications services and, with respect to backhaul, as wholesale providers to wireless carriers. For both retail and wholesale purposes, it is critical for cable operators to keep their networks operational to the greatest extent possible, and companies devote considerable time and resources to achieving this objective.

---

1 *Public Safety and Homeland Security Bureau Seeks Comment on Improving Wireless Network Resiliency to Promote Coordination Through Backhaul Providers*, Public Notice, DA 18-1238 (rel. Dec. 10, 2018) (*Backhaul Notice*).

2 *See* Comments of NCTA – The Internet & Television Association, PS Docket No. 11-60 (July 16, 2018) (NCTA July 2018 Comments).

3 *Backhaul Notice* at 2.

The specific practices employed by individual cable operators may vary based on the conditions they face in their service territories, but there are elements that are common to most providers. For example, as part of normal operations, companies work to promote continuity of service by engaging in dynamic routing of traffic, providing generators at hubs and data centers, and offering battery backup and power supplies. Similarly, cable operators take a variety of steps to ensure resiliency in preparation for a natural disaster. Charter, for example, activates an action plan that includes steps such as testing and topping off standby generators, ensuring that all necessary in-house and contract staff are in place and that all necessary equipment is in stock and ready for deployment, and securing any vehicles that may be needed for restoration efforts and topping them off with fuel.[4] Other operators have similar action plans in place.

The response of cable operators to the 2017 and 2018 hurricane seasons demonstrates that current business continuity processes and procedures are working well.[5] Operators successfully coordinated with cell tower providers and carriers in managing recovery and restoring service as quickly as possible. For example, in the aftermath of Hurricane Michael, Comcast voluntarily made available an existing tower at one of its headends in the Florida Panhandle to help a large wireless carrier set up a 10 GB microwave link to restore its backhaul significantly faster than wireline facilities could be repaired.[6] To help prevent fiber cuts during recovery from Hurricane Michael, Comcast visibly marked its active lines with red flags, which

---

4 *See* Comments of Charter Communications, PS Docket No. 18-339 at 2 (Dec. 17, 2018) (Charter 18-339 Comments); *see also* Comments of Charter Communications, PS Docket No. 17-344 (Jan. 22, 2018) (Charter 17-344 Comments).

5 *See, e.g.*, Charter 18-339 Comments; Comments of Comcast Corporation, PS Docket No. 18-339 (Dec. 17, 2018) (Comcast 18-339 Comments); Charter 17-344 Comments; Comments of Comcast Corporation, PS Docket No. 17-334 (Jan. 22, 2018).

6 *See* Comcast 18-339 Comments at 11.

warned third-party crews not to cut or remove those cables.[7] Similarly, Charter worked closely with local Emergency Response Agencies in the aftermath of Hurricane Florence to identify and prioritize the repair of its fiber backhaul that was damaged by debris removal companies and was necessary to provide cell tower connectivity. Other operators followed similar practices in response to these recent hurricanes.

II. BACKHAUL PROVIDERS OPERATE UNDER DETAILED BUSINESS AGREEMENTS AND SERVICE CONTINUITY PLANS

The *Backhaul Notice* raises a number of questions regarding the level of coordination and information sharing that occurs among wireless carriers and backhaul providers before, during, and after a natural disaster.[8] In assessing these issues, it is critical that the Commission consider that cable operators and other companies provide backhaul to wireless network operators pursuant to detailed business agreements and comprehensive business continuity plans. These service level agreements are negotiated on an individual basis in response to each customer's technical requirements and business objectives.

Because backhaul is provided pursuant to bilateral contractual arrangements, it is not practical or consistent with industry practice to assess the resiliency of individual backhaul facilities or providers against some generalized set of expectations that does not reflect their contractual obligations. Wireless providers control the key decisions that affect the resilience of their networks, and they contract for different levels of backhaul redundancy and priority of restoration depending on their individual needs and budgets. For example, some wireless providers specify redundant network equipment at high-priority sites or arrange for alternate backup circuits from a different backhaul provider, while others do not. Whether to use

---

7 *Id.* at 12.

8 *Backhaul Notice* at 2-3.

redundant backhaul in the "last mile" to a cell tower is each wireless provider's business decision, not a choice by the backhaul provider. Even when a cable operator's core network is fully redundant,[9] backhaul to individual towers may still be affected by commercial power failures or fiber cuts if a wireless carrier has not arranged for redundant facilities. Similarly, backup power at cell sites (e.g., generator or battery) is typically the responsibility of the wireless provider/backhaul customer, not the backhaul provider.

Although the details vary, business agreements generally require that backhaul providers notify the wireless company of any outage or failure, supply contact information, and give estimates on when the issue will be resolved. Cable operators typically have a close working relationship with their backhaul customers, and contract provisions often include detailed escalation contacts and procedures for coordination during outages. For events predicted in advance (e.g., landfall of a hurricane), a cable operator's Network Operations Center (NOC) will typically establish conference bridges with the NOCs of backhaul customers, as well as with the NOCs of other fiber/backhaul providers in the affected area, to proactively share information and coordinate restoration of service. For unexpected events (e.g., "sunny day" outages), cable operators work to establish the same NOC-to-NOC information exchange immediately after discovery of an issue and work with any other affected companies to triage and resolve the problem.

In the unlikely event of a backhaul outage on a cable operator's network, cable operators typically notify backhaul customers in accordance with their contractual obligations and initiate

[9] Cable operators' core networks are highly redundant and protected against transport or equipment failures, and each company's major facilities are designed to withstand disasters. For example, Comcast's headend facilities are fully prepared to handle power outages, fiber damage, water damage, and other situations with enough reserve fuel supply for extended backup power. Comcast also subjects its core network to annual stress tests to ensure the engineered redundancy is functioning properly. Other operators follow similar practices.

communications with affected service providers as soon as they detect the outage. Notification and restoration efforts proceed as expeditiously as possible and are not delayed for a determination of who is at fault or which company is ultimately responsible for repairs.

In addition to bilateral contractual arrangements with wireless providers, backhaul providers also engage in extensive coordination with government officials.[10] Large backhaul providers maintain contact information for federal, state and local emergency response agencies and power companies to address emergency response, network restoration, and continuity of operations. Many cable companies also participate in the U.S. Department of Homeland Security's National Coordinating Center for Communications, which continuously monitors incidents and events that impact emergency communications, including natural disasters.

III. THERE IS NO NEED TO EXPAND THE EXISTING FRAMEWORK TO INCLUDE BACKHAUL PROVIDERS OR TO CREATE A NEW FRAMEWORK SOLELY FOR BACKHAUL PROVIDERS

The *Backhaul Notice* asks whether the Framework should be extended to backhaul providers or whether a separate voluntary framework should be established solely for backhaul providers.[11] NCTA does not support either of these options. The current Framework focuses on roaming arrangements, mutual aid among wireless providers, outreach to wireless subscribers, cell site outage data, and other matters that may be pertinent to the wireless industry but have little relevance to cable operators providing wireline backhaul. Reinventing the Framework to address issues such as the resiliency of fiber networks or communications and coordination among backhaul and wireless providers would expand the scope far beyond wireless resiliency

[10] *See* NCTA July 2018 Comments at 2-3.

[11] *Backhaul Notice* at 3.

and fundamentally change the nature of the voluntary commitments being requested of signatories.

Moreover, with multiple layers of coordination and information sharing already in place, adding backhaul providers to the Framework is not only unnecessary but potentially disruptive to restoration efforts. To the extent requirements would replicate existing business arrangements, it is unnecessary to extend the current Framework to backhaul providers. And to the extent Framework requirements would depart from existing business arrangements, requiring backhaul providers to comply with two sets of procedures in the midst of a chaotic disaster situation could hinder priority restoration of critical services.

For similar reasons, the Commission also should not pursue a new voluntary framework solely directed at backhaul providers. As noted above, backhaul providers operate pursuant to negotiated contracts with wireless carriers, and backhaul *customers* are frequently responsible for making key decisions that affect network resiliency and continuity of service in an emergency situation. A voluntary, national framework setting out resiliency, service restoration, or information-sharing practices for backhaul providers to follow in any disaster would not provide any greater incentive where the actual performance that must be delivered is spelled out in hundreds of bilateral contracts that may vary by region and company. Nor is such a framework needed given that these bilateral contracts include enforcement mechanisms that provide strong incentives for backhaul providers to deliver the services they have committed to provide, which necessarily requires a constant focus on keeping the network up and running to the greatest extent possible.

CONCLUSION

As demonstrated above, there are numerous ways in which backhaul providers coordinate with wireless carriers and government officials to ensure communication, coordination and

continuity of service during disasters. Therefore, it is not necessary for backhaul providers to participate in the existing Framework or to develop a new framework solely for backhaul providers.

Respectfully submitted,

/s/ Loretta Polk

Loretta Polk
Steven F. Morris
Jennifer K. McKee
NCTA – The Internet & Television Association
25 Massachusetts Avenue, N.W. – Suite 100
Washington, D.C. 20001-1431
(202) 222-2445

January 28, 2019